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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,937	08/09/2001	Kurudi H. Muralidhar	7287-000017	4932

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EXAMINER	
ZHEN, LI B	

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/925,937	MURALIDHAR ET AL.	
	Examiner	Art Unit	
	Li B. Zhen	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 20 are pending in the application.

Response to Amendment

2. Applicant's amendment to claim 18 overcomes the 35 U.S.C. 112, second paragraph rejection presented in the Non-Final Office Action dated 02/09/2006. Therefore, the 35 U.S.C. 112, second paragraph rejection of claims 18 and 19 are withdrawn.

Response to Arguments

3. Applicant's arguments filed 04/14/2006 have been fully considered but they are not persuasive. In response to the Non-Final Office Action dated 02/09/2006, applicant argues that Meyer does not teach a master computer that adjusts one of attributes, parameters and operations in order to configure a first I/O device that is connected to a first network and wherein the master computer subsequently clones properties that includes said one of attributes, parameters, and operations of the first I/O device in order to configure a second I/O device that is subsequently connected to the first network. Examiner respectfully disagrees and submits that Meyer teaches applicant's invention as claimed. Applicant's invention as claimed requires a master adjusts one of attributes, parameters and operations to configure a first I/O device that is connected to a first network and clones properties that includes said one of attributes, parameters, and operations of the first I/O device to configure a second I/O device that is subsequently connected to the first network. Meyer discloses a master computer [master controller 36, Fig. 3, col. 5, lines 25 – 45] that adjusts one of attributes, parameters and operations to configure a first I/O device [Installation software 100 defines a generic device interface object 102, which may be configured by device interface object configuration files 104 to instantiate objects 106-110 tailored to specific devices made by specific manufacturers; col. 5, lines 26 – 45]. The installation software executing on the master controller [see Fig. 3], adjusts one of attributes and parameters and operations by configuring the generic device interface object according to object configuration files, which defines the characteristics of a device [col. 5, lines 45 – 67].

The installation software sets [adjusts] the attributes and parameters of the generic device interface object, which is a logical representation of the I/O device, based on the configuration files [i.e., see col. 7 – col. 8]. Meyer also discloses a Variable Put section to update a device when installation software sets or changes a variable [col. 8, lines 52 – 65]; therefore, the Variable Put would be used to adjust the attributes and parameters of the device. As to a master computer subsequently clones properties that include said one of attributes, parameters, and operations of said first I/O device in order to configure a second I/O device, Meyer discloses using an existing configuration file to configure a new device [i.e., see col. 6]. By using an existing configuration file that is associated with a first device to configure a new device, the master clones the properties of the first device in order to configure the new device and the new device would have the same properties as the first device. Therefore, Meyer teaches applicant's invention as claimed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,615,088 to Myer et al. [hereinafter Myer, cited in the previous office action].**

6. As to claim 1, Myer teaches input/output (I/O) devices [a plurality of devices, appliances and/or equipment; col. 2, lines 52 – 67] connected to a network of an industrial control system [control area networks 30 and 31; col. 2, lines 52 - 67], comprising:

a first network [control area network 30; col. 3, lines 1 - 22];

a plurality of I/O devices connected to the first network [a plurality of devices, appliances and/or equipment; col. 2, lines 52 – 67]; and

a master computer [Master controller 36; col. 3, lines 1 – 21] coupled to the first network [Master controller 36 may also poll each device in control area network 30 periodically to monitor its status; col. 3, lines 1 - 22] and including control software [a specific interface object instance operable to communicate and operate with the at least one device; col. 1, lines 53 – 62] with an object oriented model [col. 5, lines 27 – 45] for defining one of attributes [characteristics of device number 260; col. 5, lines 46 – 67], parameters and operations of the I/O devices [interface object instance operable to communicate and operate with the at least one device; col. 1, lines 53 – 62] wherein said master computer adjusts said one of attributes, parameters, and operations in order to configure a first I/O device that is connected to said fist network [Installation software 100 defines a generic device interface object 102, which may be configured by device interface object configuration files 104 to instantiate objects 106-110 tailored to specific devices made by specific manufacturers; col. 5, lines 26 – 45] and wherein said master computer subsequently clones properties that include said one of attributes, parameters, and operations of said first I/O device in order to configure a second I/O device [If the configuration for the new device does exist, then the configuration file is compared with the configuration file information obtained from the new device....specific device interface object can be instantiated, as shown in block 138. Alternatively, the interface object instances may be generated when the configuration file is loaded in block 128 or upon startup when all configuration files 104 are loaded into installation software 100 prior to bringing the new device on-line; col. 6, lines 29 – 49] that is subsequently connected to said first network [process by which the devices may be installed is sufficiently flexible to allow either the insertion of the hardware device first or the configuring of the device interface object first and then attach them to one another; col. 9, lines 19 – 32].

7. As to claim 10, Myer teaches a system for cloning input/output (I/O) devices [a plurality of devices, appliances and/or equipment; col. 2, lines 52 – 67] connected to a network of an industrial control system [control area networks 30 and 31; col. 2, lines 52 – 67], comprising:

a first network [control area network 30; col. 3, lines 1 - 22];

a second network [control area network 31; col. 2, lines 53 - 67] coupled to the first network;

a first plurality of I/O devices connected to the first network [a plurality of devices, appliances and/or equipment; col. 2, lines 52 – 67];

a second plurality of I/O devices connected to the second network [col. 3, lines 21 – 38]; and

a master computer [Master controller 36; col. 3, lines 1 – 21] coupled to one of the first and second networks [Master controller 36 may also poll each device in control area network 30 periodically to monitor its status; col. 3, lines 1 - 22] and including control software [a specific interface object instance operable to communicate and operate with the at least one device; col. 1, lines 53 – 62] with an object oriented model [col. 5, lines 27 – 45] for defining one of attributes [characteristics of device number 260; col. 5, lines 46 – 67] and operations of at least one of the I/O devices on one of the first and second networks [interface object instance operable to communicate and operate with the at least one device; col. 1, lines 53 – 62], wherein the master computer adjusts said one of attributes, parameters and operations in order to configure a first I/O device that is connected to one of said first and second networks [Installation software 100 defines a generic device interface object 102, which may be configured by device interface object configuration files 104 to instantiate objects 106-110 tailored to specific devices made by specific manufacturers; col. 5, lines 26 – 45] and wherein said master computer subsequently clones properties that include said one of attributes, parameters, and operations of said first I/O device in order to configure a second I/O device [If the configuration for the new device does exist, then the configuration file is compared with the configuration file information obtained from the new device....specific device interface object can be instantiated, as shown in block 138. Alternatively, the

interface object instances may be generated when the configuration file is loaded in block 128 or upon startup when all configuration files 104 are loaded into installation software 100 prior to bringing the new device on-line; col. 6, lines 29 – 49] that is subsequently connected to the other of said first and second networks [process by which the devices may be installed is sufficiently flexible to allow either the insertion of the hardware device first or the configuring of the device interface object first and then attach them to one another; col. 9, lines 19 – 32].

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 2 – 9 and 11 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myer in view of U.S. Patent No. 6,845,416 to Chasmawala et al. [hereinafter Chasmawala, cited in the previous office action].**

10. As to claim 2, Myer teaches the object oriented model [col. 5, lines 27 – 45] but does not specifically teach a hierarchical class structure with inheritance properties.

However, Chasmawala teaches a controller area network [col. 4, lines 16 – 22] with I/O devices [peripheral device 106 may be coupled to one or more sensors and/or actuators 114A-N; col. 4, lines 54 - 57] and controller software [CAN software; col. 7, lines 18 – 38] with a hierarchical class structure with inheritance properties [a hierarchical collection of objects (instances), each of which has attributes and methods; col. 7, lines 39 – 60].

11. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the teaching of controller software with a hierarchical class structure with inheritance properties because this creates relationships between an

object and the objects above it in hierarchy [col. 7, lines 39 – 60 of Chasmawala] and allows new objects to re-use code which already existed in another class.

12. As to claim 3, Myer as modified teaches the hierarchical class structure includes a device class [col. 7, lines 18 – 38 of Chasmawala].

13. As to claim 4, Myer as modified teaches the device class includes a plurality of device types [col. 4, lines 44 – 54 of Chasmawala].

14. As to claim 5, Myer as modified teaches the object oriented model includes at least one class level hierarchically below the device class [col. 7, lines 38 – 60 of Chasmawala].

15. As to claim 6, Myer as modified teaches devices instantiated at the at least one class level inherit the one of the attributes, parameters and operations [Each instance of a particular class has attributes that define its externally visible qualities, as well as methods that are used to perform actions; col. 7, lines 18 – 38 of Chasmawala] of the at least one class level and a device type of the device class from which the at least one class level depends [col. 7, lines 38 – 60 of Chasmawala].

16. As to claim 7, Myer as modified teaches the device types include at least one of analog and digital devices [col. 2, lines 25 – 43 of Chasmawala].

17. As to claim 8, Myer as modifies teaches the control software includes a graphical user interface for interfacing the control software and cloning the I/O devices [control area network user interfaces (CAN UI/F) 35; col. 2, lines 52 - 67 of Myer].

18. As to claim 9, Myer as modified teaches the I/O devices include at least one of barcode readers, sensors, actuators, and motor starters [peripheral device 106 may be

coupled to one or more sensors and/or actuators 114A-N; col. 4, lines 54 – 57 of Chasmawala].

19. As to claim 18, Myer as modified teaches the first and second networks are connected by a gateway [col. 4, lines 9 – 28 of Myer].

20. As to claim 19, Myer as modified teaches the first and second networks are different types of networks [col. 2, lines 52 – 67 of Myer].

21. As to claims 11 – 17 and 20, these are rejected for the same reasons as claims 2 – 9 above.

Conclusion

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

CONTACT INFORMATION

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2194

lbz

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER